REMARKS

Claim Cancellations

Claims 3, 12-14, 20, and 23, which were previously withdrawn from consideration, have been canceled without prejudice to place the application in better form for allowance.

Claim Rejections Under 35 U.S.C. § 112, First Paragraph

Claims 1, 4-5, 7-8, 10-11, 15-18 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. 11/15/2006 Office Action, page 2, paragraph no. 6.

Applicants respectfully traverse this rejection. Specifically, Applicants respectfully assert that claim limitations identified by the Examiner are supported in the specification as filed. The essential question of compliance with the written description requirement of 35 U.S.C. § 112, first paragraph is, "does the description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed." *In re Gosteli*, 872 F.2d 1008, 1012 (Fed. Cir. 1989); *see also* MPEP 2163.02. "Amendments to an application which are supported in the original description are NOT new matter." MPEP 2163.07. It is important to bear in mind that claim amendments need not be supported verbatim; implicit or inherent support will suffice. *See, e.g.,* MPEP 2163 ("While there is no *in haec verba* requirement, newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure."); MPEP 2163.02 ("The subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement.").

In making the rejection, the Examiner states,

> Claims 1 and 19 contain the newly added limitations "wherein the reflective metal layer is in contact with the haze-prevention layer," and "wherein the haze-prevention layer is in contact with the substrate", that have no adequate support in the specification as originally presented. In paragraph 0007 of the specification, it is disclosed that the haze-prevention layer is interposed between the substrate and the reflective layer. However, there is nowhere in the specification that discloses the haze-prevention layer being in contact with the substrate and the reflective layer.

11/15/2006 Office Action, pages 2-3, paragraph no. 6. Applicants respectfully disagree with the statement that, "there is nowhere in the specification that discloses the haze-prevention layer being in contact with the substrate and the reflective layer". Applicants specifically stated in their last amendment that "[s]upport for these amendments may be found, at least, in claim 21 of the application as filed". 8/22/2006 Amendment, page 8, first paragraph. Note that process claim 21 in the application as filed includes the step of "applying a haze-prevention layer to a surface of a substrate", so a haze-prevention layer in contact with the substrate was disclosed in the application as filed. Note also that process claim 21 in the application as filed includes the step of "applying a reflective metal layer to a surface of the haze-prevention layer", so a reflective metal layer in contact with the haze-prevention layer was disclosed in the application as filed. These claim limitations are further supported by the working examples in the application as filed. See, for instance, Examples 1-3 and Examples 4-11 and Example 14. In each of these examples, a substrate was coated with (and therefore in contact with) a plasma-polymerized organosilicone layer, and a plasma-polymerized organosilicone layer was coated with (and therefore in contact with) a reflective metal layer.

Thus, there is ample support in the specification as filed to show that Applicants possessed at the time of filing the subject matter of the claim 1 and claim 19 limitations, "wherein the reflective metal layer is in contact with the haze-prevention layer" and "wherein the haze-prevention layer is in contact with the substrate". Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of 1, 4-5, 7-8, 10-11, 15-18 under 35 U.S.C. § 112, first paragraph.

Finally, Applicants respectfully note that although claim 19 includes the same contested limitations as claim 1, claim 19 was not rejected. To the extent that the Examiner may have intended to reject claim 19 on the same basis, the arguments above are sufficient to rebut such a rejection.

General Comments on the Examiner's "Response to Arguments"

In response to Applicants' 8/22/2006 Amendment rebutting the nonstatutory double patenting rejections and obviousness rejections over U.S. Patent No. 6,420,032 to Iacovangelo, the Examiner stated that Applicants' arguments "do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made . . . [and] they do not show how the amendments avoid such references or objections." 11/15/2006 Office Action, page 6, paragraph no. 12. Applicants continue to sincerely believe that their previous amendments and remarks were sufficient to overcome the rejections. As specifically pointed out below, Applicants also believe that the Examiner's response fails to answer the substance of Applicants' arguments. "Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicants' argument and answer the substance of it." MPEP 707.07(f).

Applicants therefore stand by their previous remarks, and rather than reiterating them at length, Applicants, in their remarks below, have attempted to distill key points from those arguments in order to make abundantly and succinctly clear the patentable differences between Applicants' claims and the claims and disclosure of Iacovangelo '032.

Nonstatutory Double Patenting Rejections

Claims 1, 4, 5, 7, 8, 10, 11, and 15-18 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-38 of U.S. Patent No. 6,420,032 to Iacovangelo ("Iacovangelo '032"). Applicants respectfully traverse the rejection for at least two reasons, either of which is sufficient to overcome

the rejection: (1) the transparent metal oxide layer of Iacovangelo 032' claims 1, 17, and 35 is compositionally distinct from Applicants' haze prevention layer; and (2) the abrasion resistant and scratch resistant layers in Iacovangelo '032 claims 25-28 and 38 are positionally distinct from Applicants' claim 1 protective layer.

Iacovangelo's Claimed Metal Oxide Layer is Compositionally Distinct from Applicants' Haze Prevention Layer

In her discussion of this rejection, the Examiner appears to suggest the equivalence of the transparent metal oxide layer of the Iacovangelo '032 claims and the haze-prevention layer of Applicants' claims.

> The claims of the patent disclose all of the limitations as recited in the instant claims. However, independent claims 1, 17, and 35 of the patent disclose the transparent metal oxide layer; whereas claims 1, 19, and 21 disclose a haze-prevention layer. Thus, the scope of the claims of the patent overlaps that of the instant claims, rendering them obvious over each other.

6/27/06 Office Action, page 3, next-to-last paragraph. However, Iacovangelo's '032 metal oxide layer is compositionally distinct from Applicants' haze-prevention layer. Applicants' independent claim 1 includes the limitation that the haze-prevention layer that "comprises a plasma-polymerized organosilicone". The "transparent metal oxide layer" of Iacovangelo '032 independent claims 1 and 17 and the "ultraviolet radiation absorption layer" of Iacovangelo '032 claim 35 do not satisfy this limitation. Specifically, the metal oxide layer and UV absorption layer of Iacovangelo '032 claims 1, 17, and 35 are described therein as "including at least one compound selected from the group consisting of ZnO, indium doped zinc oxide, and aluminum doped zinc oxide." There is no teaching or suggestion in the Iacovangelo '032 claims to include a plasma-polymerized organosilicone in the metal oxide layer or UV absorption layer. Accordingly, Applicants have specifically pointed out how the transparent metal oxide layer and UV absorption layer of Iacovangelo '032 claims 1, 17, and 35 do not satisfy the requirement of Applicants' claim 1 that the haze-prevention layer "comprises a plasma-polymerized organosilicone". **If the Examiner disagrees with Applicants and maintains her position that the Iacovangelo '032 transparent metal oxide layer of**

claims 1 and 17 and UV absorption layer of claim 35 satisfy Applicants' claim 1 requirement that the haze-prevention layer "comprises a plasma-polymerized organosilicone", then the Examiner should identify specific support for her position in the claims of Iacovangelo '032 and explain why Applicants' arguments above are incorrect.

Because claims 1, 17, and 35 of Iacovangelo '032 do not satisfy the requirement of Applicants' claim 1 that the haze-prevention layer "comprises a plasma-polymerized organosilicone", a prima facie case of obviousness against claim 1 has not been established, and claim 1 is patentable over the claims of Iacovangelo '032 for this reason alone. Given that claims 4, 5, 7, 8, 10, 11, and 15-18 each depend ultimately from and further limit claim 1, they, too, are patentable over the claims of Iacovangelo '032 for this reason alone.

Iacovangelo '032 Claims Do Not Teach Applicants' Claim 1 Protective Layer

Applicants' claims are further patentable over the claims of Iacovangelo '032 because the Iacovangelo '032 claims do not teach or suggest Applicants' claim 1 protective layer.

Applicants' claim 1 requires the presence of "a protective layer comprising the plasma decomposition product of an oxidant and a reactant gas selected from silanes, disilanes, and organosilicon compounds; wherein the reflective layer is interposed between the haze-prevention layer and the protective layer; and wherein the protective layer is in contact with the reflective metal layer". The claims of Iacovangelo '032 do not teach or suggest a layered structure having a single layer satisfying all the limitations of Applicants' claim 1 protective layer.

The Examiner has stated, "Note that the abrasion resistant layer or scratch resistant layer in claims 25-28, 36 of the patent is considered as the protective layer in the instant claims." 11/15/2006 Office Action, page 4, second paragraph. Applicants respectfully disagree for the reasons that follow, claim-by-claim.

Iacovangelo '032 claim 25 does not satisfy the limitations of Applicants'

claim 1 protective layer for at least two reasons: first, Applicants' claim 1 protective layer "compris[es] the plasma decomposition product of an oxidant and a reactant gas selected from silanes, disilanes, and organosilicon compounds" and Iacovangelo '032 claim 25 does not teach or suggest this limitation (claim 25 recites "an abrasion resistant layer" but does not specify its composition); second, Applicants' claim 1 protective layer is "in contact with the reflective metal layer", whereas the abrasion resistant layer of Iacovangelo '032 claim 25 is separated from the transparent metal layer by a transparent metal oxide layer.

Iacovangelo '032 claim 26 does not satisfy the limitations of Applicants' claim 1 protective layer because Applicants' claim 1 protective layer is "in contact with the reflective metal layer", whereas the abrasion resistant layer of Iacovangelo '032 claim 26 is separated from the transparent metal layer by a transparent metal oxide layer.

Iacovangelo '032 claims 27 and 28 do not satisfy the limitations of Applicants' claim 1 protective layer because Applicants' claim 1 protective layer is "in contact with the reflective metal layer", whereas the abrasion resistant layer of Iacovangelo '032 claim 27 and 28 is separated from the transparent reflective layer by a transparent metal oxide layer OR by the combination of a transparent metal oxide layer and a stress reducing interlayer.

Iacovangelo '032 claim 36 does not satisfy the limitations of Applicants' claim 1 protective layer Applicants' claim 1 protective layer is "in contact with the reflective metal layer", whereas the scratch resistant coating of Iacovangelo '032 claim 36 is separated from the metal-containing infrared radiation reflection layer by at least the metal oxide-containing ultraviolet radiation absorption layer.

Thus, not one of Iacovangelo '032 claims 25-28, and 36 includes a layer that satisfies the limitations of Applicants' claim 1 protective layer. **If the Examiner disagrees with**

Applicants and maintains her position that the Iacovangelo '032 abrasion resistant layer of claims 25-28 and scratch resistant layer of claim 36 satisfy the compositional and positional limitations of Applicants' claim 1 protective layer, then the Examiner should identify specific support for her position in Iacovangelo '032 claims 25-28 and 36 and explain why Applicants' arguments above are incorrect.

Because claims 25-28 and 36 of Iacovangelo '032 do not recite a layer satisfying the compositional and positional limitations of Applicants' claim 1 protective layer, a prima facie case of obviousness against claim 1 has not been established, and claim 1 is patentable over the claims of Iacovangelo '032 for this reason alone. Given that claims 4, 5, 7, 8, 10, 11, and 15-18 each depend ultimately from and further limit claim 1, they too are patentable over the claims of Iacovangelo '032 for this reason alone.

Summary

Applicants have explained two distinctions between their independent claim 1 and the cited claims of Iacovangelo '032. Either of these distinctions is sufficient to preclude the establishment of a prima facia case of obviousness against claim 1. Together, they leave no doubt that Applicants' claim 1 is patentable over the claims of Iacovangelo '032. Given that claims 4, 5, 7, 8, 10, 11, and 15-18 each depend from and further limit claim 1, they too are patentable over the claims of Iacovangelo '032. Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claims 1, 4, 5, 7, 8, 10, 11, and 15-18 under the judicially created doctrine of obviousness-type double patenting over claims 1-38 of Iacovangelo '032.

Claim Rejections Under 35 U.S.C. § 102(e) over Iacovangelo '032

Claims 1, 7, 8, 10, 11, 16, 17, 19, 21, and 22 stand rejected under 35 U.S.C. § 102(e), as allegedly anticipated by U.S. Patent No. 6,420,032 to Iacovangelo ("Iacovangelo '032"). Applicants respectfully traverse this rejection.

To anticipate a claim, a reference must disclose each and every element of the claim. *Lewmar Marine v. Varient Inc.*, 3 U.S.P.Q.2d 1766, 1767 (Fed. Cir. 1987). The cited reference must clearly and unequivocally disclose the claimed subject matter

without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference. *In re Arkley*, 172 USPQ 524, 526 (C.C.P.A. 1972).

Anticipation requires that all of the limitations of the claim be found within a single prior art reference. *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991). From a perspective in which the substrate is at the bottom of the layered structure, Applicants' independent claims 1, 19, and 21 each require a reflective metal layer that (1) is reflective, (2) is above and in direct contact with a layer meeting the compositional limitations of Applicants' haze-prevention layer (that is, a layer "compris[ing] a plasma-polymerized organosilicone"), and (3) is below and in direct contact with a layer meeting the compositional limitations of Applicants' protective layer (that is, a layer "comprising the plasma decomposition product of an oxidant and a reactant gas selected from silanes, disilanes, and organosilicon compounds"). Iacovangelo '032 does not teach a layer that, by itself, simultaneously satisfies these three requirements.

The Examiner has made the following analogies between the layers of Iacovangelo '032 and those of Applicants claims:

> Iacovangelo discloses a laminate, comprising a polymeric substrate 1, an interlayer 5 (haze-prevention layer), a reflective metal layer 2, a metal oxide UV absorbing layer 3, and an abrasion resistant layer 4 (protective layer) (see Fig. 3A-D; col. 6, ln. 13-44). . . . The reflective metal layer comprises aluminum or silver (see col. 5, ln. 36-42). Iacovangelo further discloses an interlayer 6 of aluminum, between layers 3 and 4 (see Fig. 3C; col. 6, ln. 59-66), which also meets the requirement of the reflective metal layer in the claims.
>
> It is further noted that Fig. 3C illustrates that the reflective metal layer 2 is in contact with the interlayer 5, which in turn is in contact with substrate 1, thus meeting the newly added limitation.

11/15/2006 Office Action, pages 4-5.

First, Applicants respectfully note that Examiner's description quoted above mixes up Applicants' terminology with that of Iacovangelo '032. Specifically,

Iacovangelo '032 describes layer 2 as an "adhesion promoting layer" or a "transparent adhesion layer 2", not a "reflective metal layer" as stated by the Examiner. Iacovangelo '032, col. 3, lines 56-57 and 58-59; col. 5, lines 29-30, 36, and 38; col. 6, lines 43-44; col. 7, lines 3 and 46-47; col. 11, lines 11 and 30-31. Also note that the abstract of Iacovangelo '032 describes the adhesion promoting layer as "a thin, transparent Al or Ag layer" (emphasis added). Iacovangelo '032 abstract. This difference is important because Applicants' "reflective metal layer" is reflective to visible light, whereas any metal layers in Iacovangelo '032 must be transparent to visible light in order for the layered structure as a whole to function for its intended purpose as "a window usable in a vehicle, building, apparatus, or display device". Iacovangelo '032, col. 1, lines 52-53; *see also* col. 1, lines 11-40 and claims 35-38. (Applicants acknowledge that at least one metal layer of Iacovangelo '032 may function as an infrared reflective layer. *See, e.g.,* Iacovangelo '032, col. 1, lines 6-7 ("a metal adhesion and IR reflection layer"); claim 35 ("infrared radiation reflection layer"). However, reflecting infrared radiation is different from reflecting visible light.)

More importantly, not one of the metal-containing layers of Iacovangelo '032 identified by the Examiner meets all the limitations of Applicants' claim 1, 19, and 21 reflective metal layer. In the passage quoted above, the Examiner has specifically asserted the equivalence of Applicants' claim 1 reflective metal layer with the Iacovangelo '032 adhesion promoting layer 2 of Figures 3A-D and column 6, line 13-44, and with interlayer 6 of Figure 3C and column 6, lines 59-66. However, these layers do not meet the limitations of Applicants' claim 1 reflective metal layer for at least the following reasons.

Adhesion promoting layer 2 of Figure 3A is not taught to be "reflective" to visible light (instead, the Iacovangelo '032 abstract describes this layer as "transparent"), and it is not in contact with a layer having the composition of Applicants' claim 1 haze-prevention layer (instead, it is above a substrate and below a metal oxide layer).

Adhesion promoting layer 2 of Figures 3B-D is not taught to be

"reflective" to visible light (instead, the Iacovangelo '032 abstract describes this layer as "transparent"), and it is not simultaneously in contact with a haze-prevention layer comprising a plasma polymerized organosilicone and a separate protective layer comprising the plasma decomposition product of an oxidant and a reactant gas selected from silanes, disilanes, and organosilicone compounds (although the adhesion promoting layer 2 is above abrasion resistant layer 5 which "may comprise a plasma polymerized organosilicon material" (col. 6, ll. 19-21), it is also below a metal oxide UV absorbing layer; it therefore is not in contact with a haze-prevention layer comprising a plasma polymerized organosilicone and a separate protective layer comprising the plasma decomposition product of an oxidant and a reactant gas selected from silanes, disilanes, and organosilicone compounds).

Interlayer 6 of Figure 3C is not taught to be "reflective" to visible light (and such reflectivity, if present, would interfere with the intended function of the Iacovangelo '032 article as a window), and it is not simultaneously in contact with a haze-prevention layer comprising a plasma polymerized organosilicone and a separate protective layer comprising the plasma decomposition product of an oxidant and a reactant gas selected from silanes, disilanes, and organosilicone compounds (although the interlayer 6 is below "abrasion resistant layer 4", it is also above a "metal oxide UV absorption layer 3" (emphasis added); it therefore is not in contact with a haze-prevention layer comprising a plasma polymerized organosilicone and a separate protective layer comprising the plasma decomposition product of an oxidant and a reactant gas selected from silanes, disilanes, and organosilicone compounds).

Thus, each of the metal-containing layers of Iacovangelo '032 identified by the Examiner fails to satisfy at least two limitations of Applicants' claim 1 reflective metal layer. Furthermore, it is impermissible for the Examiner to argue that a single layer of the reference can serve both as Applicants' haze-prevention layer and Applicants' protective

layer, because these two layers are clearly distinct and spatially separate. **If the Examiner disagrees with Applicants and maintains her position that the one of the metal layers of Iacovangelo '032 meets all the limitations of Applicants' claim 1 reflective metal layer, then the Examiner should identify the description of that layer in in Iacovangelo '032, explain how it satisfies each of Applicants' reflective metal layer limitations, and explain why Applicants' arguments above are incorrect.**

Because Iacovangelo '032 does not teach a layer satisfying the compositional and positional limitations of the reflective metal layer of Applicants' independent claims 1, 19, and 21, Iacovangelo '032 does not anticipate these claims. Given that claims 7, 8, 10, 11, 16, 17, and 22 each depend ultimately from and further limit claim 1 or claim 21, they too are not anticipated by Iacovangelo '032. Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claims 1, 7, 8, 10, 11, 16, 17, 19, and 21-22 under 35 U.S.C. § 102(e) over Iacovangelo '032.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 50-3619 maintained by Assignee.

Respectfully submitted,

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